Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Original). A chemical generator for producing chemical solutions from first and second reactants, comprising:

(a) a first reactant inlet;

(b) a second reactant inlet;

(c) a reaction chamber operably connected to the first and second reactant inlets; and

(d) hydrologic controls for hydrologically controlling the flow of the first and second reactants.

Claim 2 (Original). The chemical generator of claim 1 further comprising:

(e) a diluent inlet; and

(f) a dilution chamber operably connected to the reaction chamber and the diluent inlet, the hydrologic controls responsive to predetermined fluid levels in the dilution chamber.

Claim 3 (Original). The chemical generator of claim 2 further comprising:

(g) a first eductor operably connected to the diluent inlet and the reaction chamber;

(h) a first float control valve operably connected to the first eductor;

(i) a second eductor operably connected to the dilution inlet and the reaction chamber; and

(j) a second float control valve operably connected to the second eductor.

Claim 4 (Original). The chemical generator of claim 3 wherein each of the first reactant inlet, the second reactant inlet and the diluent inlet include a rate-controlled orifice.

Claim 5 (Original). The chemical generator of claim 3 wherein the reaction chamber has an outlet which includes a check valve.

Claim 6 (Original). The chemical generator of claim 3 further comprising:

(k) a third float control valve operably connected and in fluid communication with the first and second float control valves to control fluid flow to the first and second float control valves.

Claim 7 (Original). The chemical generator of claim 6 further comprising:

(l) a fourth float control valve operably connected and in fluid communication with the third float controlled valve to terminate fluid flow at a predetermined fluid level in the dilution chamber.

Claim 8 (Original). The chemical generator of claim 6 wherein a needle valve is operably connected to the third float control valve to time control fluid flow thereto.

Claim 9 (Original). The chemical generator of claim 3 wherein the reaction chamber is contained within the walls of the diluent chamber.

Claim 10 (Original). A chemical generator for producing chemical solutions from first and second reactants, comprising:

(a) a first reactant inlet including a rate-controlled orifice;

(b) a second reactant inlet including a rate-controlled orifice;

(c) a reaction chamber with an outlet including a check valve, contained within the walls of the diluent chamber, operably connected to the first and second reactant inlets;

(d) hydrologic controls for hydrologically controlling the flow of the first and second reactants;

(e) A diluent inlet; and

(f) a dilution chamber, defined by the walls of the diluent chamber, operably connected to the reaction chamber and the diluent inlet, the hydrologic controls responsive to predetermined fluid levels in the dilution chamber;

(g) a first eductor operably connected to the diluent inlet and the reaction chamber;

(h) a first float control valve operably connected and in fluid communication with the first eductor;

(i) a second eductor operably connected with the dilution inlet and the reaction chamber;

(j) a second float control valve operably connected and in fluid communication with the second eductor;

(k) a third float control valve operably connected and in fluid communication with the first and second float control valves;

(l) a fourth float control valve operably connected and in fluid communication with the third valve; and

(m) a needle valve operably connected and in fluid communication with each of the first, second and third float control valves.

Claim 11 (Original). The chemical generator of claim 10 wherein the first reactant is a chlorite salt, the second reactant is a food grade acid and the diluent is water.

Claim 12 (Original). A method for producing chemical solutions from first and second reactants, comprising:

(a) passing a first reactant and a second reactant to a reaction chamber;

(b) allowing the first and second reactants to react to form an activated solution;

(c) passing a diluent to a dilution chamber;

(d) hydrologically controlling the flow of the activated solution from the reaction chamber to the dilution chamber, the hydrologic controls responsive to predetermined fluid levels in the dilution chamber.

Claim 13 (Original). The method of claim 12 further comprising:

(e) passing the diluent through a first eductor to draw the first and second reactants into the reaction chamber;

(f) controlling the diluent flow to the first eductor with a first float control valve;

(g) passing the diluent through a second eductor to draw the activated solution from the reaction chamber into the dilution chamber; and

(h) controlling the diluent flow to the second eductor with a second float control valve.

Claim 14 (Original). The method of claim 13 wherein passing the first and second reactant to the reaction chamber is each rate-controlled.

Claim 15 (Original). The method of claim 13 wherein the flow of the activated solution from the reaction chamber into the dilution chamber is controlled by a check valve.

Claim 16 (Original). The method of claim 13 further comprising:

(i) controlling the flow of the diluent by a third float control valve, responsive to a predetermined fluid level, to the dilution chamber, the first eductor and the second eductor.

Claim 17 (Original). The method of claim 16 further comprising:

(j) terminating the flow of the diluent from the diluent inlet to the diluent chamber by a third float control valve responsive to a predetermined fluid level.

Claim 18 (Original). The method of claim 16 wherein controlling the flow to the third float control valve is controlled by diluent passing through a needle valve.

Claim 19 (Currently Amended). A method for producing chemical solutions from first and second reactants, comprising:

(a) passing a first reactant and a second reactant with rate-controlled orifices to a reaction chamber;

(b) allowing the first and second reactants to react to form an activated solution while being contained by a check valve;

(c) passing a diluent to a dilution chamber;

(d) hydrologically controlling the flow of the activated solution from the reaction chamber to the dilution chamber, the hydrologic controls responsive to predetermined fluid levels in the dilution chamber;

(e) passing the diluent through a first eductor to draw the first and second reactants into the reaction chamber;

(f) controlling the diluent flow to the first eductor with a first float control valve;

(g) passing the diluent through a second eductor to draw the activated solution from the reaction chamber into the dilution chamber;

(h) controlling the diluent flow to the second eductor with a second float control valve;

(i) controlling the flow of the diluent by a third float control valve, responsive to a predetermined fluid level, to the dilution chamber, the first eductor and the second eductor;

~~(i)~~(j) terminating the flow of the diluent from the diluent inlet to the diluent chamber by a third float control valve responsive to a predetermined fluid level; and

~~(v)~~(k) controlling the flow to each of the first, second and third float control valve with diluent passing through a needle valve.

Claim 20 (Original). The method of claim 19 wherein the first reactant is a chlorite solution, the second reactant is a food grade acid and the diluent is water.

Claim 21 (Orignal). The method of claim 19 wherein the first reactant is a combination of sodium chlorate and hydrogen peroxide, the second reactant is sulphuric acid and the diluent is water.

Claim 22 (Original). A chemical generator for producing chemical solutions from first and second reactants, comprising:

(a) a reaction chamber having inlets for the first and second reactants;

(b) a means for hydrologically controlling the reaction of the first and second reactants.